Application No. 10/664,271 Reply to Office action of 12/01/2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9 (Canceled)

10. (Previously Presented) A method for forming a semiconductor device, comprising:

providing a substrate having a lattice structure;

implanting a precipitate region within said lattice structure;

introducing a dynamic defect within said lattice structure and proximate said implanted precipitate region, such that said implanted precipitate region affects a position of said dynamic defect within said lattice structure; and

forming a gate structure over said substrate having said precipitate region therein, said precipitate region being noncontinuous.

- 11. (Original) The method as recited in Claim 10 wherein said implanting includes implanting a Si0₂ precipitate region.
- 12. (Original) The method as recited in Claim 10 wherein said implanting includes implanting a SiN precipitate region.
- 13. (Original) The method as recited in Claim 10 wherein said precipitate region is located from about 60 nm to about 150 nm below said gate structure.

Claim 14 (Canceled)

- 15. (Original) The method as recited in Claim 10 wherein said dynamic defect is an edge dislocation, a vacancy, a dislocation loop formed by an agglomeration of vacancies within said lattice, a silicon self-interstitial atom, a substitutional atom, or a dislocation loop formed by the agglomeration of self interstitial atoms.
- 16. (Original) The method as recited in Claim 10 wherein said substrate is a first silicon substrate and said method further includes forming a silicon-germanium layer over said first silicon substrate and forming a second silicon substrate over said silicon-germanium layer, such that said silicon-germanium layer is in a relaxed state and said second silicon substrate is in a stressed state.
- 17. (Original) The method as recited in Claim 10 wherein said substrate is a first silicon substrate and said method further includes implanting silicon-germanium region into said first silicon region and forming a second silicon substrate located over said first silicon substrate. such that said second silicon substrate is in a stressed state.
- 18. (Original) The method as recited in Claim 10 wherein said substrate is a first silicon substrate and said device further includes a silicon or germanium implant induced dynamic defect region within said first silicon region wherein said first silicon substrate is in a stressed state induced by said silicon or germanium implant induced dynamic defect region.
- (Original) The method as recited in Claim 10 wherein said implanting includes implanting to a peak concentration ranging from about 5E17 atoms/cm³ to about 5E18 atoms/cm³
- (Original) The method as recited in Claim 10 wherein said implanting includes implanting using an energy ranging from about 40 keV to about 70 keV.

Application No. 10/664,271 Reply to Office action of 12/01/2006

- 21. (Original) The method as recited in Claim 10 further including annealing said implanted precipitate region using a temperature ranging from about 500°Cto about to about 1200°C after said implanting.
- 22. (Original) The method as recited in Claim 21 wherein said annealing includes a first anneal at a temperature ranging from about 600°C to about 800°C and a second anneal at a temperature ranging from about 1000°C to about 1100°C.

Claims 23-28 (Canceled)

23. (New) The method of claim 10, wherein said precipitate region is noncontinuous at an area below said gate structure.